

Lone Aspen Environmental Assessment

General Instructions

It shall be the responsibility of the subdivider to submit the information required by this Section with the preliminary plat. This Environmental Assessment format shall be used by the applicant in compiling a thorough description of the potential impacts for the proposed subdivision. Each question pertinent to the proposal must be addressed in a full comprehensive and systematic fashion (both maps and text). Incomplete Environmental Assessments will not be accepted.

The Environmental Assessment will be objectively measured to assure that all mandatory elements are included and that, based upon objective standards, all prospective impacts are adequately addressed. At a minimum the Environmental Assessment must contain the following for all assessment contents:

- a. A summary of probable impacts and statement of impact for each environmental consideration topic;
- b. A discussion to support the statement of impact;
- c. Referenced sources and citations to support the statement of impact;
- d. If applicable, site specific maps and documentation to support the statement of impact discussion.

If, at any time during the application process, material information comes to light that is not addressed in the Environmental Assessment, the subdivider shall be required to amend the environmental Assessment to adequately address the issue. In this event the 60 working day review period is suspended and will not resume until the revised Environmental Assessment has been submitted, reviewed and approved by the Planning and Zoning Office. Following review and acceptance of the amended Environmental Assessment, the application process will resume at the same stage of the 60 working day review period that the original application was before the additional information came to light.

Environmental Assessment Contents

There are two major sections to the Environmental Assessment. The first section incorporates the natural systems provisions of 76-3-603 and 76-3-608, MCA. The second section evaluates the impacts to the human community and incorporates 76-3-608(3)(a) criteria for public health, safety, and local services. The sources of information for each section of the Assessment shall be identified. All Environmental Assessments shall contain the signature, date of signature and mailing address of the owner of the property and the person, or persons, preparing the report and citation and a copy of all supporting information. . **(Note:** Any response to any section not specifically sourced in this report is attributed to the Author of the report.)

Section 1 – Resource Assessment and Impact Criteria Report

a. Surface Water:

- i. Locate on the preliminary plat all surface water and the delineated 100 year floodplains which may affect or be affected by the proposed subdivision including:

Lone Aspen (A Resubdivision of Lot 28 of Elk Highlands Phase 2) is located on Whitefish Mountain Resort in the Elk Highlands neighborhood. There are no surface waters associated with the subject property. The Big Mountain area appears on FEMA FIRM Panel 1080G with a Zone X designation. The FIRM Panel defines Zone X as "Areas determined to be outside the 0.2% annual chance floodplain".

- A. All natural water systems such as perennial and intermittent streams, lakes and ponds, rivers, or marshes.

There are no natural water systems, perennial or intermittent on the subject property.

- B. All artificial water systems such as canals, ditches, aqueducts, reservoirs, irrigation or drainage systems.

There are no artificial water systems, canal, ditches, reservoirs, or irrigation systems on the subject parcel. There are no irrigation diversions or other artificial water impoundments associated with the project.

- ii. Describe all probable impacts to surface waters which may affect or be affected by the proposed subdivision including name, approximate size, present use, and time of year when water is present and proximity of proposed construction (e.g. buildings, sewer systems, roads) to surface waters.

There are no surface waters within the confines of the proposed Lone Aspen development.

- iii. Describe any existing or proposed stream bank or shoreline alterations or any proposed construction or modification of lake beds or stream channels. Provide information on location, extent, and purpose of alteration. If any construction or changes are proposed which require a 310 Permit from the Flathead County Conservation District the subdivider

shall acknowledge that the permit is required and will be obtained prior to final plat.

As there are no streams, creeks or ponds within the subdivision, there will be no alterations of stream banks or shorelines.

- iv. If wetlands are present, the subdivider shall provide a wetlands investigation completed by a qualified consultant, using the most current U.S. Army Corps of Engineers' Wetlands Delineation Manual. If the investigation indicates the presence of jurisdictional wetlands, a wetland delineation shall be shown on the preliminary and final plats. If any construction or changes are proposed which require a 404 Permit, the subdivider shall acknowledge that the permit is required and will be obtained.

There are no wetlands associated with or on the subject parcel being considered for development (Flathead County GIS Map Search, Hydrology Montana Wetlands Layer).

b. Ground Water:

- i. Establish the seasonal minimum and maximum depth to water table, dates on which these depths were determined, and the location and depth of all known aquifers which may be affected by the proposed subdivision. Monitoring may be waived if evidence of minimum and maximum groundwater elevations can be documented.

Carver Engineering has worked on a number of infrastructure projects in and around the proposed Elk Highlands properties. They have constructed the emergency access road for Sunrise Ridge/Elk Highlands, extended water and sewer mains, and inspected construction the lift terminal and towers in Elk Highlands. In all of the excavations there was no presence of groundwater in the excavations which where in many cases ten feet or greater. As much of this construction starts as soon as the snow melts, the observations would assume a worst-case scenario.

- ii. If determined from subsection (b)(i) above that any area within the proposed subdivision is within eight feet of the surface, the high-water table shall be measured from tests taken during the period of the highest groundwater elevations, generally from March 15 through June 30, during average precipitation years and reported in the environmental assessment.

All previous excavation in this area has revealed no presence of groundwater and therefore no steps were taken to avoid groundwater.

- iii. Describe any steps necessary to avoid probable impacts and the degradation of ground water and ground water recharge areas as a result of the subdivision.

The proposed subdivision is not located within a groundwater recharge area. The subdivision will not utilize on-site waste-water treatment facilities and will connect to the Big Mountain Public Sewer System which transports its effluent down to the City of Whitefish Wastewater Treatment facility.

c. Geology/Soils:

- i. Locate on the preliminary plat any known geologic hazards affecting the subdivision which could result in property damage or personal injury due to rock falls or slides, mud, snow; surface subsidence (e.g., settling or sinking); and seismic activity.

The proposed development is located in an alpine environment which is typical of a ski resort area in the west. The topography is diverse with areas of gentle topography and areas of steep topography. There are rock out croppings located throughout the property. (See attached Slope Map, prepared by Sands Surveying, Inc). Areas of 40% and greater are precluded from development with the proposed building envelopes.

The project site is located in the Whitefish Mountain Range and this area has been covered and scoured by significant glacial activity. Near surface soils consist of glacial till and material derived from metasedimentary rock. The soils are comprised of very gravelly silt loam over weathered Precambrian bedrock. Based on observations of surface and subsurface conditions there are no known or observed naturally occurring geologic hazards which could result in property damage; however, hazards primarily related to cut and fill slopes could occur during construction of driveway, buildings and other improvements if such work is not done properly.

The site lies within the Intermountain Seismic Belt and is mapped as a zone of potentially significant seismic ground movement. Subsurface materials observed at the site could be classified as Site Class C in accordance with the International Building Code (IBC). However, based on the presence of bedrock, the risk of liquefaction or lateral spreading is low. Bedrock can be typically be encountered on the site at depths of 0 to 40 inches.

- ii. Explain what measures will be taken to prevent or materially lessen the danger and probable impacts of future property damage or personal injury due to any of the hazards referred to above.

Due to the presence of shallow bedrock and no observable signs of slope instability, it is anticipated that slope stability will not be a concern on naturally occurring slopes. However, all cut or fill slopes in glacial till soils should be no steeper than 2H:1V, unless shoring, bracing, soil nailing, retaining walls or some other approved method of slope stabilization is used. Steeper slopes in the Dolomite bedrock are possible but should be evaluated on a case by case basis. All fill soils must be properly placed and compacted; surface water, and subsurface water if present, must be intercepted and diverted around work sites.

The specific seismic Site Class designations of the UBC, and any requirements associated with each, will be taken into consideration during the design of structures within subdivision.

As the proposed subdivision fronts on already developed paved roads, very little site work will be needed other than a new sewer and water tap. As a result, most of the site work will occur after the final plat is filed and the construction mitigations will be the lots owner and their contractor's responsibility.

- iii. Explain any unusual soil, topographic or geologic conditions on the property which limit the capability for building or excavation using ordinary and reasonable construction techniques. The explanation should address conditions such as shallow bedrock, high water table, unstable or expansive soil conditions, and slope. On the preliminary plat identify any slopes in excess of 40 percent.

Although not an unusual condition in mountainous terrain, the depth to bedrock is a factor that must be addressed in the construction of buildings, driveways and the installation of utilities. As with previous phases of Elk Highlands, Northern Lights West and Sun Rise Ridge, blasting of bedrock is commonly required for building and infrastructure construction. The shallow depth to bedrock can be a benefit as it provides a stable base for footings and foundation walls and it provides a stable base for road construction. Areas of 40% and greater are precluded from development with the proposed building envelopes.

- iv. Identify any soils constraints, including probable impacts due to expansive soils, hydric soils, or any soils which limit sanitary facilities. Explain special design considerations and methods needed to overcome the soil limitations.

The developer is not proposing any on-site sanitary facilities. The Lone Aspen development will hook to the Big Mountain Sewer District wastewater collection facilities. Wastewater from all development within

the Big Mountain Sewer District is conveyed through District sewer mains down the mountain and to City of Whitefish sewer mains along East Lakeshore Drive. Wastewater is subsequently transported to and treated at the City of Whitefish Wastewater Treatment Facility.

- v. Describe the location and amount of any cut or fill three or more feet in depth. These cuts and fills should be indicated on a plat overlay or sketch map. Where cuts or fills are necessary, describe any plans to prevent erosion and to promote re-vegetation such as replacement of topsoil and grading.

As the property is very mountainous, there will be cut and fills slopes associated with the driveway and home construction and this is typical of all developments within Whitefish Mountain Resort and on Big Mountain.

d. Vegetation:

- i. On a sketch map indicate the distribution of the major vegetation types such as marsh, grassland, shrub, coniferous forest, deciduous forest, mixed forest, including critical plant communities such as stream bank or shore line vegetation; vegetation on steep, unstable slopes; vegetation on soils highly susceptible to wind or water erosion.

The property is primarily forest land. There are no marshes grass lands and few deciduous trees (Thus the Subdivision name). The proposed development is adjacent to other phases of residential development on the Whitefish Mountain Resort (See Aerial Photo, Figure 1).

Figure 1.



- ii. Identify and sketch map any locations of noxious weeds and identify the species of weeds and explain measures to control weed invasion.

The property does have a few noxious weeds located in areas roadways. Both the existing Elk Highlands HOA and Winter Sports Inc, the operating company of Whitefish Mountain Resort, have active plans for eradicating weeds from these lands. Lone Aspen will expect a condition of approval that requires a weed management plan with the Flathead County Weed Department.

- iii. Describe any probable impacts and any protective measures to preserve trees and critical plant communities (e.g., design and location of roads, lots and open spaces).

There are no identified critical plant communities within the subdivision. As with much of Northern Lights West and Elk Highlands these large lots allow a significant portion of the lot to remain native and most of these alpine homes have very small landscaped area preferring the natural

landscape. However with construction of the building pads and driveways, a number of trees will be removed from the site.

e. Wildlife:

To write this section of the EA, the wildlife maps prepared by Flathead County GIS with cooperation by Montana FW&P were consulted. The Montana Natural Heritage Program was consulted for Species of Concern data (Plant and animal).

The property is mapped as summer range for elk, an overall low distribution for black bear, very low density for Whitetail deer, and presence of mule deer. There are annual sighting of grizzly bears on Big Mountain and it is safe to assume they pass through the areas of the proposed subdivision.

i. Describe species of fish and wildlife which use the area affected by the proposed subdivision.

The property is mapped as summer range for elk and a very low distribution for whitetail deer. The maps do not indicate that mule deer are present but they have been witnessed on the property. The Big Mountain West area is mapped with an overall distribution of black bear. Grizzly bear are known to be in the general area. Mountain lions may also be present however they typically favor areas with higher concentrations of deer.

According to the Montana Heritage Program, the species identified in their report are not necessarily specific to this property but are located within the general area. The Map (Page 3 of 37) provided by the Montana Natural Heritage Program shows species occurrences within two to three miles of the proposed project. The species identified in the MHP report include the Westslope Cutthroat Trout, Bull Trout, Pigmy Whitefish, Grizzly Bear, Fisher, Wolverine, and Canada Lynx, Northern Alligator Lizard, Coville Indian Paintbrush, and Small Yellow Lady's Slipper. (See Appendix A).

ii. Identify on the preliminary plat any known critical or "key" wildlife areas, such as big game winter range, waterfowl nesting areas, habitat for rare or endangered species, or wetlands.

The subject property is not winter range habitat. There are no water bodies, either perennial or intermittent on the property. There is no riparian vegetation on the site.

- iii. Identify rare and endangered species on-site. Describe the impacts and measures to mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement.

Montana Heritage Program (MHP) prepared a search for sensitive species in the section where the subdivision occurs plus a one to two mile buffer. The Montana Heritage Program identified ten species of concern within the nine to fifteen square mile search area: The species identified in the MHP report include the Westslope Cutthroat Trout, Bull Trout, Pigmy Whitefish, Grizzly Bear, Fisher, Wolverine, and Canada Lynx, Northern Alligator Lizard, Coville Indian Paintbrush, and Small Yellow Lady's Slipper. The salmonid species are associated with the Whitefish Lake and Swift Creek. Whitefish Lake is 1.1 miles from the site and Swift Creek is 2.5 miles from the site. There is no direct conduit between the subject property and these waterbodies. Grizzly Bears definitely visit and travel through this property as they do all along the Whitefish Range however there is no unique food sources or habitat that would attract the bears. The same can be said for the lynx and the fisher.

According to the information provided by MHP, the alligator lizard likes talus slopes of which there are none on the subject property. The report also states that they also like some open areas with shrubby vegetation. The site does have shrubby plant life and some open areas around rock outcrops. However the report has little information on how to avoid impacts and it appears that this species is "widespread and rare". As this project is within the resort envelope of the plan area and other developments, we will conclude that the species has the bulk of the Whitefish Range to use as a home and this small area of private land can be used for human habitat.

The Coville Indian paint brush could be suited for the stoney soil and subalpine location however in walking the site the plant was not noticeable. The MHP maps indicate that there was only one siting of the Indian Paint Brush and it was over a mile to the southeast. The Small Yellow Lady Slipper likes habitat that is damp and moist meadow. There are no such habitats on the subject property.

- iv. Describe any probable impacts and proposed measures to protect or enhance wildlife habitat or to minimize degradation (i.e., keeping building and roads back from shorelines; setting aside marshland as undeveloped open space).

There does not appear to be any critical habitat within the confines of the Elk Highlands/Lone Aspen development. As part of the original ODP and subdivision proposal Winter Sports Inc and the developers of neighboring

Elk Highlands placed approximately 150 acres into a conservation easement so that the property deemed most sensitive by the plan will never be developed.

- v. It is recommended that the subdivider discuss the impact of the proposed development on fish and wildlife with the Department of Fish, Wildlife and Parks (FWP) and incorporate any recommendations from the agency to mitigate wildlife impacts.

As the proposed subdivision is only splitting a lot that is part of a much larger subdivision and completely surrounded by urbanized development, I did not contact FW&P regarding this subdivision that creates only one new lot. With hunting season started and big game rifle season ready to begin, the Wildlife Biologists at FW&P have more pressing commitments to oversee than commenting on this subdivision.

On the neighboring Elk Highlands Phase 3 development Tim Thier commented back in November 21, 2008. According to Mr. Thier, the proposed subdivision is in a location that is somewhat urbanized with all utilities available. Mr. Thier did not anticipate any issues with the proposed subdivision as long as the typical conditions were added to the CC&R's that prohibit the feeding of wildlife and carries a prohibition against wildlife attractants such as fruiting trees, storage of pet foods outside, etc.

f. Wildlife Habitat

- i. Proposed subdivisions that are contiguous to urbanized areas are presumed to have minimal impacts of wildlife habitat.

The proposed subdivision is located within the confines of the Whitefish Mountain Resort. Whitefish Mountain has gone through extensive long range planning working with the planning offices of both Flathead County and the City of Whitefish. Whitefish Mountain has also consulted with local service providers including Whitefish Public works, Big Mountain Fire and Flathead County Sheriff. The Whitefish Mountain Resort is in a constant communication with the United States Forest Service and US Fish and Wildlife. The Resort also works with agencies such as Fish Wildlife and Park, the Army Corps of Engineers, and MDEQ on these development plans. With the amount of planning and study that has occurred on the Resort area over the years we should presume minimal impacts on wildlife habitat.

- ii. Proposed subdivision in locations with riparian areas, wetlands, rivers, streams, lakes, or other natural surface waters are presumed to have an impact on wildlife habitat. Describe the impact(s) and measures to

mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement.

The proposed subdivision does not include riparian, wetlands or water front property. As the property lacks those listed water resources, the applicant is not proposing any mitigations.

- iii. Proposed subdivisions in an area with rare or endangered species, as identified by state or federal agencies, are presumed to have an impact on the habitat of these species. Describe the impacts(s) and measures to mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement.

Montana Heritage Program (MHP) prepared a search for sensitive species in the section where the subdivision occurs plus a one to two mile buffer. The Montana Heritage Program identified ten species of concern within the nine to fifteen square mile search area: The species identified in the MHP report include the Westslope Cutthroat Trout, Bull Trout, Pigmy Whitefish, Grizzly Bear, Fisher, Wolverine, and Canada Lynx, Northern Alligator Lizard, Coville Indian Paintbrush, and Small Yellow Lady's Slipper. The salmonid species are associated with the Whitefish Lake and Swift Creek. Whitefish Lake is 1.1 miles from the site and Swift Creek is 2.5 miles from the site. There is no direct conduit between the subject property and these waterbodies. Grizzly Bears definitely visit and travel through this property as they do all along the Whitefish Range however there is no unique food source or habitat that would attract the bears. The same can be said for the lynx and the fisher.

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The conclusion is that either distance or lack of critical habitat would prevent the proposed subdivision from impacting these specific species.

- iv. Proposed subdivisions on or adjacent to land identified by state or federal agencies as critical habitat are presumed to have an impact on wildlife habitat. Describe the impact(s) and measures to mitigate the impacts(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement.

There is no identified critical habitat on or adjacent to the proposed subdivision.

g. Agriculture and Timber Production:

- i. On a sketch map locate the acreage, type and agricultural classifications of soils.

The bulk of the property, approximately seven acres, is timbered. The property has never been in agricultural production. The following map and table provide the soil area, type, and classifications. The attached USDA Natural Resources Conservation Service, Web Soil Survey information is intended primarily for agricultural production (Figure 2).

Figure 2: Soils Classifications



Source: USDA Natural Resources Conservation Service, Web Soil Survey

Map Unit Legend				
Flathead National Forest Area, Montana (MT619)				
Flathead National Forest Area, Montana (MT619)				
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
23-8	Andeptic Cryoboralfs-Andic Cryochrepts complex, hilly	6.9	94.9%	
75	Rock outcrop, structural breaklands	0.4	5.1%	
Totals for Area of Interest		7.3	100.0%	

- ii. Describe any agricultural water user facility on the site or in proximity that might be affected and explain any probable impacts(s) and measures which will be taken to avoid or mitigate probable impacts.

There are no shared agricultural water works, canals, irrigation ditches, pump houses etc that will be affected by the proposed subdivision. There are no irrigation rights associated with the property.

- iii. It is recommended that the subdivider discuss any impact of the proposed development on agricultural water user's facilities with irrigation company or organization controlling the facility and incorporate any recommendations from the agency to mitigate water user impacts

The property is not in an agricultural irrigation district or are there any agricultural irrigation districts or companies in proximity of the subdivision.

- v. If timbered, identify and describe any timber management recommendations which may have been suggested or implemented by the U.S. Forest Service in the area of this proposal.

Much of the Whitefish Mountain Resort ski and summer recreation areas are located on USFS Lands. The Resort operates through a permit with the USFS skiing and summer use along with maintenance of the trails, ski runs, and structures to support the business. The Resort and the USFS work closely together to address the needs of all interest parties as well as the environment which include management of the lands. Currently there are no USFS recommendation that would impact the design or use of the Lone Aspen project.

h. Agricultural Water User Facilities:

- i. On a sketch map or aerial photo, locate any agricultural water user facility, including but not limited to agricultural water works, wells, canals, irrigation ditches, and pump houses on-site or adjacent to the proposed subdivision.

There are no shared agricultural water works, canals, irrigation ditches, pump houses etc. The property is not located within an agricultural water district.

- ii. Describe any agricultural water user facility on the site or in proximity that might be affected and explain any probable impacts(s) and measures which will be taken to avoid or mitigate probable impacts.

There are no shared agricultural water works, canals, irrigation ditches, pump houses etc that will be affected by the proposed subdivision.

- iii. It is recommended that the subdivider discuss any impact of the proposed development on agricultural water user's facilities with irrigation and company or organization controlling the facility and incorporate any recommendations from the agency to mitigate water user impacts

The property is not in an agricultural irrigation district or are there any agricultural irrigation districts or companies in proximity of the subdivision.

i. Historical Features:

- i. Describe and locate on a plat overlay or sketch map any known or possible historic, paleontological, archeological or cultural sites, structures, or objects which may be affected by the proposed subdivision.

The State Historic Preservation Office (SHPO) was consulted in the process of writing the Big Mountain Neighborhood Plan. SHPO conducted a search of its data base for the Mountain and surrounding areas. The search called out a mine adit on the very western edge of the Mountain. The mine adit was likely the Whitey Henderson Lime Mine located in the Hell Roaring Drainage. The proposed subdivision does not have any mining shafts or remnants of mining activity.

- ii. Describe any plans to protect such sites or properties.

There are no structures on the subject property nor any remnants of the mine.

- iii. Describe the impact of the proposed subdivision on any historic features, and the need for inventory, study and/or preservation and consultation with the State Historic Preservation Office (SHPO).

As stated previously, the SHPO does not have any records of any historic features in the area other than a mine adit that is located west of the proposed subdivision. No impact is anticipated as a result of the proposed subdivision.

j. Visual Impact:

- i. Describe any efforts to visually blend development activities with the existing environment.

The proposed development is situated along a ridge on the west side of Big Mountain. The development is located at the Elk Highlands Drive and the Lot was part of Phase 2 of Elk Highlands. Lots 27 and 28 of Elk Highlands are both significantly larger than other lots within the Elk Highlands Subdivision. The proposed subdivision will blend with the existing resort residential development and ski-in/ski-out opportunities that the resort provides. The project will be in character with the neighboring development. (See Photos.)

Photo 1 – Looking west into the subdivision from Elk Highlands Drive.



Photo 2 – The Lone
Aspen.



Photo 3 – Looking
southwest to Whitefish
Lake

k. Air Quality:

- i. Describe any anticipated impact to air quality caused from dust or other air pollutants, including dust created by roads, and any means to mitigate the impact to air quality.

The proposed subdivision splits an existing lot with access provided by Elk Highlands Drive which is a privately owned and maintained road paved and constructed to County Standards. There will be no new roads created with the proposed subdivision. The applicants will adhere to a dust abatement plan during construction of homes and driveways.

1. Area Hazards

- i. Describe and locate on a plat overlay or sketch map any hazardous concerns or circumstances associated with the proposed subdivision site, including, but not limited to:

- A. Any part of the proposed subdivision that is located within the Wildland Urban Interface priority area. If located in the Wildland Urban Interface or high fire hazard area identified by a local fire district or fire protection authority described probable impact(s) and measures to mitigate the impacts(s), or submit a statement why no impact is anticipated, providing documentation to support the statement.

The subject property is hilly with varying terrain. The property is located within the Big Mountain Fire District. The property is mapped as Wildland Urban Interface on the Flathead County GIS. All of Whitefish Mountain all the way down to and including the City of Whitefish is in the Wildland Urban Interface.

To mitigate fire hazard, the Resort and associated subdivision implement Fire Wise practices including vegetation thinning and building materials. The Elk Highlands development utilizes a public water system with fire flow and hydrants (There is a hydrant located directly in front of the proposed subdivision). The subdivision and the Whitefish Mountain Resort have a secondary emergency egress, through Stoltz Land and Lumber properties down to the Iron Horse development in the City Limits.

- B. Any potential hazardous materials contained on site, including high pressure gas lines, high voltage transmission lines, super fund sites, abandoned landfills, mines or sewer treatment plants, etc. In some cases an "Environmental Site Assessment" may be required.

There are no hazardous materials located on the site. There are no residential, commercial, or industrial structures located on the property and no apparent history of dumping on site (MDEQ and NRIS Search).

- C. Describe measures to mitigate any adverse impacts associated with area hazards.

As no hazards were identified, no mitigation measures are proposed.

Part 2 - Community Impact Report (This portion of the Report was prepared in part with information provided by Carver Engineering)

a. Water Supply:

- i. Describe the proposed water system and how water will be provided for household use and fire protection and the number of gallons needed to meet the needs of the anticipated final population.

Water will be provided by connections to the Big Mountain Water Company's public water supply system. The water system will provide water for domestic consumption, irrigation and fire protection. Based on a demand of 320 gallons per day (gpd) per single-family residence, the average daily demand for domestic purposes will be 640 gpd for the two houses. The maximum average daily demand will be 1,280 gpd and the peak hourly demand will be about 7 gpm. However, since water demands for Lot 28A have already been accounted for with Elk Highlands, Ph. 2, the additional demand on the system will only be 1/2 of those demands.

Based on site topography and the likely choice for low-maintenance landscaping, water use for irrigation purposes is expected to be low. Assuming that each single-family lot has approximately 10,000 ft² of lawn or landscape area that requires irrigation at a rate of 1.0" per week, the amount of water needed to meet irrigation demands would be about 1,780 gpd or about 7.5 gpm if applied over a 4-hour period each day.

- ii. Indicate whether the plans for water supply meets state standards for quality, quantity and construction criteria.

The Big Mountain Water Company's water system presently consists of five (5) drilled wells with a combined pumping capacity of over 480 gpm, a 500,000-gallon welded-steel reservoir, two (2) 300,000-gallon concrete reservoirs, and a network of 6", 8" and 10" distribution mains. Although not totally separate, the overall water system supplies two (2) distinct service areas. The 500,000-gallon reservoir, one of the 300,000-gallon reservoirs, and Well Nos. 1, 2 & 4 generally serve the "Base Area" and lower elevation residential users. The other 300,000-gallon reservoir and Well Nos. 3 & 5

serve higher elevation residential users which at this time serves or will serve a total of 156 single-family lots in Sunrise Ridge, Phases 3 & 4; Northern Lights; Elk Highlands, Phases 1 & 2; Northern Lights West, Phases 1, 2 & 3; and Medicine Rock. This portion of the water system is commonly referred to as the "Sunrise Area" water system. The "Sunrise Area" portion of the water system will serve the two lots in Lone Aspen. It should be noted that a third well (Well #6) is currently being drilled and will be added to the Sunrise Area system when completed.

Water from the Big Mountain Water Company's public water system is routinely tested for various bacterial and chemical parameters and the water consistently meets all DEQ safe drinking water standards.

iii. If the subdivider proposes to connect to an existing water system:

A. Identify and describe that system.

Water to proposed Lot 28B in Lone Aspen will be provided by new service connection to the Big Mountain Water Company's public water system. There is an existing 8" water main in Elk Highlands Drive.

B. Provide written evidence that permission to connect to that system has been obtained.

See the letter provided by the Big Mountain Water Company. (Appendix D)

C. State the approximate distance to the nearest main or connection point.

The water main is located adjacent to the subdivision in Elk Highlands Drive and already serves Lot 28A of the subdivision. Also see proposed water system layout accompanying this preliminary plat submittal.

D. State the cost of extending or improving the existing water to service the proposed development.

The cost of installing the new water service to Lot 28B is estimated to be about \$2,750.

E. Show that the existing water system is adequate to serve the proposed subdivision.

Water to the proposed lot will come from the “Sunrise” portion of the Big Mountain Water Company’s public water system. This portion of the system consists of a 300,000-gallon reservoir and Well Nos. 3 & 5, providing a combined pumping capacity of 180 gpm. As noted earlier, a third well (Well #6) is currently being drilled and will be added to the Sunrise Area system when completed. There have been a total of 156 single-family lots that have been approved to connect to the system and, with the approval of Lone Aspen, the total will be 157 single-family lots. As is presently exists, with the largest producing well out of service, the system will still be capable of meeting the maximum daily demand of 157 single-family residences. The system will also be capable of providing fire flows of 1,500 gpm for a period of at least 2 hours.

iv. If a public water system is to be installed, discuss:

A. Who is to install that system and when it will be completed?

The water supply system is already in place and operational and the owners will make the new water service connection. The work will be completed in 2021.

B. Who will administer and maintain the system at the beginning of subdivision development and when subdivision is completed.

This one lot subdivision only needs a service connection to the existing water system. Big Mountain Water Company owns, operates and maintains the water system.

C. Provision of evidence that the water supply is adequate in, quality, and dependability (75-6-102 MCA).

Water from the Big Mountain Water Company’s public water system is routinely tested for various bacterial and chemical parameters and the water consistently meets all DEQ safe drinking water standards. With the relatively recent addition of Well #5, the “Sunrise” portion of the water system can meet the maximum daily demands of all lots that have previously been approved to connect the system, and this lot now being proposed to connect, with the largest producing well out of service. As noted before, Well #6 is currently being drilled and will add capacity to the Sunrise portion of the water system.

v. If individual water systems are to be provided, describe the adequacy of supply of the ground water for individual wells or cisterns and how this was determined.

N/A - Public water system proposed.

b. Sewage Disposal:

i. Describe the proposed method of sewage disposal.

A service connection to the Big Mountain Sewer District public wastewater collection system will serve the proposed lot in Lone Aspen.

ii. Indicate the number of gallons of wastewater per day which will be generated by the proposed subdivision at its full occupancy, whether the proposed method of sewage disposal is sufficient to meet the anticipated final needs of the subdivision and whether it meets state standards.

With only one new lot, the proposed additional daily wastewater flow will be 300 gpd. The peak hourly flow rate will be about 1.4 gpm based on a peaking factor of 4.46 and assuming all wastewater is generated over a 16-hour period each day. The Big Mountain Sewer District collection system conveys wastewater generated within the District down the mountain to the City of Whitefish wastewater collection system along East Lakeshore Drive. Subsequent treatment takes place at the City's Wastewater Treatment Facility. This method of wastewater collection and treatment is more than sufficient to meet the needs of the proposed subdivision and this method meets all MDEQ requirements.

iii. If the development will be connected to an existing public sewer system, include:

A. A description of that system and approximate distance from the nearest main or connection point to the proposed subdivision.

Wastewater service to the proposed lot will be provided by a service connection to the Big Mountain Sewer District's public wastewater collection system. There is an existing 8" gravity sewer main in Elk Highlands Drive and a new 1-1/2" HDPE pressure sewer service will be installed to Lot 28B. See proposed wastewater collection system layout accompanying this preliminary plat submittal.

B. Written evidence that permission to connect to that system has been obtained.

See the attached letter from the Big Mountain Sewer District and the City of Whitefish. (Appendix B)

- iv. If a new public sewage disposal system, as defined under 75-6-102 MCA, is to be installed, discuss:

The applicants are not proposing a new public system.

- A. When the system will be completed, and how it will be financed.

N/A

- B. Who is to administer and maintain the proposed system at the beginning of subdivision development and when development is completed?

N/A

c. Storm Water Drainage

- i. Describe the proposed methods of storm water drainage for roads and other anticipated impervious surfaces, including storm water calculations.

Runoff water from a small area in the northeast corner of Lot 28 will drain toward the adjacent roadway and will follow existing roadside ditches constructed for Elk Highlands, Ph. 2. The remaining portions of Lots 28A and 29B will follow existing surface topography in a west – southwest direction through densely vegetated open areas on these lots. It is unlikely that any runoff water from impervious surfaces on the Lone Aspen lots will ever reach the lower section of Elk Highlands Drive, but if it did, water will collect and be conveyed in an existing rock lined roadside ditch. The vast majority, if not all, runoff water will be lost to infiltration into the numerous fractures in the underlying bedrock and to evapotranspiration.

All existing roadways are paved with hot plant mix asphalt. There will be no new roadways; however, there will be new driveways to Lots 28A and 28B and each driveway will be paved.

There are no stream or drainage crossings being proposed; however, new culverts will be installed, as is necessary, to convey runoff water across driveways.

- ii. Describe the proposed methods of storm water drainage for other areas of the subdivision , including stormwater calculations.

The method(s) for stormwater drainage were described in the response to the preceding question. With the exception of the proposed residential dwelling and associated improvements on Lot 28B, stormwater runoff from the property in Lone Aspen was accounted for in the stormwater

system design for Elk Highlands, Ph. 2. There have been no observed or reported problems with stormwater runoff from these properties.

Straw wattles will be installed in existing roadside ditches to help mitigate any potential erosion both during and after construction. Stormwater drainage calculations and erosion control BMP's are included on a water, sewer & stormwater drainage sheet accompanying this Preliminary Plat submittal.

- iii. Identify the mechanism and who is responsible for maintenance of the storm water drainage system.

The individual lot owners will be responsible for runoff water generated on their own properties and for runoff water that flows from their lots onto adjacent lots and onto adjacent rights-of-way. The Elk Highlands HOA is responsible for stormwater drainage within public rights-of-way and Common Areas.

d. Solid Waste Disposal:

- i. Describe the proposed system of solid waste collection and disposal for the subdivision including:

The Whitefish Mountain Resort has a trash handling facility in the maintenance area located by the Fire Hall. This facility is available to all homeowners in the Whitefish Mountain Resort area. Owners are charged a one-time plant investment fee of \$142.00 and then a usage fee of \$96 per year, which gives them unlimited use of the trash facility. If the homeowners have a contract with Big Mountain Resort Lodging (BMRL) they have the option of trash pick-up also for an individual fee. The residents, including those in the Elk Highlands development, also have the option of using North Valley Refuse for pick-up; however, North Valley encourages the use of the Whitefish Mountain Resort facility.

The trash-handling facility includes a trash compactor with a capacity of 4,500 pounds. North Valley Refuse collects the trash approximately every ten days and charges by weight for the trucking. A cardboard compactor is also located in the building. The compacted cardboard is trucked by WSI to Pacific steel and Paper for recycling.

A recycling depot is located to the north of the trash handling facility. This provides for the collection of aluminum, newspaper, and magazines. North Valley Refuse services the recycling.

- A. Evidence that existing systems for collection and facilities for disposal are available and can handle the anticipated additional volume.

The Flathead County Growth Policy (2012 Update) provides Solid Waste projection in Chapter 7. According to the Growth Policy, the landfill has a capacity for current and future needs of 29 years if the increase in waste stream grows at 8% annually and 57 years if the waste stream grows at 2%. Based on the estimated capacity remaining as of July 2008, combined with current and projected inflow as well as diversion rates, the Flathead County Landfill is anticipated to reach capacity by 2055. Expanded recycling programs could be instituted within the County to increase the life expectancy of the landfill. In 2011 the Landfill acquired additional property adjacent to the landfill and are looking to acquire more property to provide up to 100 years of life.

- B. A description of the proposed alternative where no existing system is available.

N/A

e. Roads

- i. Describe any proposed new public or private access roads or substantial improvements of existing public or private access roads.

No new roads or improvements to existing road are proposed or needed to the one new lot in Lone Aspen.



- ii. Discuss whether any of the individual lots or tracts have access directly to arterial or collector roads; and if so, the reason access was not provided by means of a road within the subdivision.

All access to the subdivision lots are from the existing Elk Highlands Drive.

- iii. Explain any proposed closure or modification of existing roads.

The proposed subdivision will not close any roads. Elk Highlands Drive will continue to provide access to the neighboring lots.

- iv. Identify existing primary road Average Vehicle Traffic and subdivision daily vehicle traffic assigned to that primary road.

The proposed subdivision will create approximately 10 additional vehicle trips per day. As these are resort homes with absentee owners, the ADT will most likely be less. There is no available traffic data for Elk Highlands Drive or Northern Lights Drive. The primary roads, Northern Lights Drive and Elk Highlands Drive are both local streets providing access to the residential neighborhood. These residential streets are not intended for use by visitors using the ski services or summer recreational opportunities.

- v. Describe provisions considered for dust control on roads.

All roads within the subdivision will be paved.

- vi. Indicate who will pay the cost of installing and maintaining dedicated and private roadways.

There will be no new roads to construct with the proposed subdivision. Road maintenance for Elk Highlands Drive is provided by the Elk Highlands Homeowners Owners Association.

- vii. Discuss how much daily traffic will be generated on existing local and neighborhood roads and main arterial, when the subdivision is fully.

As the proposed subdivision creates only one new lot and the Flathead County Subdivision Regulations attribute ten vehicle trips per day to single family residential dwellings.

- viii. Indicate the capacity of existing and proposed roads to safely handle any increased traffic. Describe any anticipated increased maintenance that will be necessary due to increased traffic and who will pay the cost of maintenance.

The new single-family lot will have not detrimental impact on the neighboring local roads providing access to the subdivision

- ix. Explain whether year-round access by conventional automobile will be available over legal rights of way to the subdivision and to all lots and common facilities within the subdivision.

Access to the subdivision will be provided by the existing Elk Highlands Drive. Year-round access will be provided by the Elk Highlands and Big Mountain Owners Association.

f. Utilities:

- i. Include a description of:

- A. The method of furnishing electric, natural gas or telephone service, where provided.

Electric, telephone, natural gas and cable TV utilities are provided within the Elk Highlands Drive right-of-way.

- B. The extent to which these utilities will be placed underground.

All utilities are installed underground.

- C. Estimated completion of each utility installation.

Utilities are in place.

g. Emergency Services:

- i. Describe the emergency services available to the subdivision such as:

- A. Is the proposed subdivision in an urban or rural fire district? If not, will one be formed or extended? In absence of a fire district, what fire protection procedures are planned?

The proposed subdivision is within the Big Mountain Rural Fire Service Area. The Fire Station is located near the intersection of Big Mountain Road and Northern Lights Drive approximately 0.5 road miles from the proposed subdivision.

- B. Police protection.

The proposed subdivision will be served by the Flathead County Sheriffs Office along with mutual aid assistance from the Whitefish Police Department. Appendix A of the Flathead County Growth Policy states that the Sheriff's Office has six divisions with 118 employees of which 48 are "on the ground" law enforcement officers responsible for the unincorporated portions of the County. The Sheriff's Office runs three shifts in a 24-hour period with 4 to 6 officers on duty each shift.

- C. Ambulance service/Medical services.

Ambulance service is provided by the Big Mountain Rural Fire District. The North Valley Hospital is located approximately seven miles from the development. Alert service is available and provided by Kalispell Regional Hospital.

- D. Give the estimated response time of the above services.

Given the close proximity to the Fire Hall and the fact that the Fire Hall is staffed 24 hours a day, seven days a week, response times to a fire even in the worst weather conditions should be less than 10 minutes.

- E. Can the needs of the proposed subdivision for each of the above services are met by present personnel and facilities?

Fire, ambulance, and police can provide service to this subdivision with existing personnel. WSI and district residents have supported the Big Mountain Fire District with donations of equipment and funds to purchase equipment. Big Mountain Fire provided a letter supporting the Pre-Plat design (Appendix B).

h. Schools:

- i. Identify the School Districts and describe the available educational facilities which would service this subdivision.

The Subdivision is located within the Whitefish School District #44. The Whitefish School District provides elementary, middle school and High School facilities. The School District completed an extensive remodel of Central School in the last twelve years. The High School had a major remodel/expansion that was finished about four years ago. The School District just completing a major remodel/expansion of the elementary school. All three projects were completed through bond initiatives approved by the voters in the School District.

- ii. Estimate the number of school children that will be generated from the proposed subdivision.

Using County wide average of 0.31 school aged children per residence. (There were 14,753 students recorded with the Flathead County Superintendent of Schools Office including public, private and home-schooled children at the beginning of the 2011 school year. The US Census Bureau 2010 counted 46,963 housing units in Flathead County – 14,753 students / 46,963 housing units = 0.31 students per unit), the seven lots would generate one student in the school system assuming full time occupancy which is not likely. According to the year 2000 census data, only 11% of the residential units on Big Mountain were determined fulltime residents and this excluded the hotel units. With the low number of full-time residences, there were only a few school aged children on the Mountain as most of the fulltime residents were “empty nesters”.

- iii. The subdivider shall discuss the impact of the proposed development on the provision of educational services with the administrator(s) of the school system(s). The subdivider shall provide a written outlining whether the increased enrollment can be accommodated by the present personnel and facilities and by the existing school bus system, any recommendations of the administrator(s), and any mitigation planned to overcome any adverse impacts of the proposed development on the provision of educational services.

As discussed in two previous sections, the schools are either newly remodeled/expanding or in the process of being remodeled and expanded. The projected student count should have no impact on the Whitefish School District. Most likely these resort residential homes will have no resident students but will pay significant taxes to the Whitefish School District.

i. Land Use:

- i. Describe comprehensive planning and/or land use regulations covering the proposed subdivision or adjacent land and if located near the jurisdictional area of an incorporated city or town, whether annexation is proposed.

The property is designated as “resort residential” by the Big Mountain West Neighborhood Plan which was adopted as an addendum to the Whitefish City-County Master Plan in 2003.

The Resort Residential designation is the exact fit for the proposed subdivision.

The Whitefish Mountain Resort is in close proximity to the City of Whitefish. The Big Mountain Sewer District and the City of Whitefish rewrote the wastewater treatment agreement in 2002. As part of that agreement, the Sewer District will require waivers of annexation to the City of Whitefish for all new hook-ups and the City agreed that they would not annex the Whitefish Mountain Resort area, formerly Big Mountain, for at least 20 years.

- ii. Describe how the subdivision will affect access to any public lands. Where public lands are adjacent to or near the proposed development, describe present and anticipated uses for those lands; (e.g., grazing, logging, recreation, etc.).

Lone Aspen is surrounded by private lands and will not impact access to public lands as a result. There are USFS Lands approximately ½ mile north of the subdivision. These US Forest Service lands provide for the operation of the ski resort by permit with the Agency. WSI has worked with the USFS for the past 50-years and will continue long into the future.

- iii. Describe the effect of the subdivision on adjacent land use.

Lands adjacent to Lone Aspen are all resort residential developments of varying densities but primarily single family residential. There is skier access to and from the development via a chair lift and skyways. With a

similar land use as neighboring properties, the proposed subdivision should not cause any change to neighboring land use.

- iv. Describe any health or safety hazards on or near the subdivision, such as mining activity or potential subsidence, high pressure gas lines, dilapidated structures or high voltage power lines. Any such conditions should be accurately described and their origin and location identified. List any provisions that will be made to mitigate these hazards.

There are no such hazards located on or near the proposed Lone Aspen subdivision.

j. Housing:

- i. Indicate the proposed use(s) and number of lots or spaces in each:

- A. For residential indicate the type of dwelling unit.

The subdivision proposed a single new lot for single family resort residential use. As such these are single family structures may be rented for short terms stays as anticipated in the zoning ordinance.

- B. For all other uses the type and intensity of use (e.g. industrial, commercial, etc.).

No commercial or industrial uses are proposed within the development.

k. Parks and Recreation Facilities:

- i. Describe park and recreation facilities to be provided within the proposed subdivision and other recreational facilities which will serve the subdivision.

The proposed Lone Aspen development is located in a ski resort area with direct access to lifts and ski trails. This ski trail double as hiking and biking trails in the snow-free months. In addition to the alpine skiing, there is Nordic skiing, snowshoeing, and other winter activities. The area provides ample recreational opportunities in the summer including Zip Lines, Alpine Slide, Walk in the Treetops, etc..

As part of the Big Mountain West ODP and the Elk Highlands Preliminary Plat for Phases 1 and 2, the Elk Highlands development dedicated 11.79 acres in common area and ski-ways and 106.7 acres in conservation easement held by the HOA. The 118 acres total of common area and

skiways greatly exceeded the parkland dedication required for the 40 lots of Elk Highlands Phases 1 and 2.

Lone Aspen subdivision as single lot subdivision is exempt from parkland dedication per Chapter 4.7.24.a.iv FCSR

1. Public Health and Safety:
 - i. Describe any probable impacts and any measures to mitigate the impacts, or submit a statement explaining why no impact is anticipated, providing documentation to support that statement that might affect public health and safety that aren't specifically addresses in other sub –sections of the environmental assessment.

Other than those mentioned in this EA, there are no other impacts and therefore mitigations that would impact the Public Health and Safety.

Prepared By: _____
Eric H. Mulcahy AICP
Sands Surveying, Inc.
2 Village Loop
Kalispell, MT 59901
(406) 755-6481

Date: _____

Applicant: _____
Rob Langford
LANCOR LLC
411 Shantilly Ct
Tallahassee, FL 32312-1610
(850) 556-7575

Date: _____

EA APPENDICIES

- A. Species of Concern data, 9/8/08, Montana Natural Heritage Program.
- B. Will Serve from Big Mountain Water and Sewer District. Letter from Big Mountain Fire District

Prepared By: Eric H. Mulcahy
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Sands Surveying, Inc.
2 Village Loop
Kalispell, MT 59901
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